

## REMARKS

The Sequence Listing is amended to correct a typographic error in SEQ ID NO. 8. Nucleotides 29 and 30 should be G and C respectively, not C and G. Support for the amendment is found in the description of record at page 68, in sequence G1P4.

A copy of the amended Sequence Listing in computer-readable form is enclosed. The copy of the Sequence Listing in computer-readable form is the same as the amended Sequence Listing contained in the description.

The description has been amended to identify sequences in bold face and underline font in accordance with the text of the description of record. Support for the amendments is found in the description of record, which describes the portions of the sequences to be illustrated in bold face or underlined text.

There are now 97 claims pending. Claim 10 is amended to clarify that oncogenes 1 and 2 are of *Agrobacterium*. Claim 27 is cancelled. Claims 28-87 are renumbered accordingly as claims 27-86. Claim 57 of record is amended to clarify that the plant seed is derived from a self-incompatible plant species. Claims 68 and 69 of record are amended to specify that the repressible lethal gene and repressor gene are located so that they segregate independently.

Claim 86 of record is amended to clarify that oncogenes 1 and 2 are of *Agrobacterium*. Claim 88 of record is cancelled, and the following claims renumbered as claims 87-97.

Applicants respectfully submit that the amendments to the description, claims and sequence listing do not constitute new matter.

### ***Concerning Article 33(2) PCT***

Claims 1, 5-7, 10, 28, 34, 39, 58, 60, 69, 70 and 97-99 of record stand rejected as lacking novelty under Article 33(2) PCT. The International Preliminary Examining Authority ("IPEA") contends that reference D1 pertains to a genetically modified plant comprising a first gene whose

expression results in a novel trait, a second gene encoding a recombinase, and a third gene encoding a repressor. The first gene is said to be linked to a promoter which is separated from the coding sequence by a blocking sequence, which again is flanked by excision sequences. The IPEA contends that specific embodiments are disclosed including the use of a lethal gene with a 35S promoter as the first gene.

Applicants respectfully traverse this rejection. Claim 1 of the instant application specifies, in step (c), "selecting a plant wherein the inserted repressor gene segregates independently from the inserted repressible lethal gene." Applicants respectfully submit that D1 does not teach or suggest this step, and that the subject matter of claim 1 is therefore novel over D1. Claims 5-7, 10, 28, 34, 39, 58 and 60 of record depend either from claim 1, or claim 14, or both. Claim 14 also includes a step of selecting a plant wherein the inserted repressor genes segregates independently from the inserted repressible lethal gene. Applicants respectfully submit that these further claims are therefore also necessarily novel over D1.

Claims 69 and 70 of record (new claims 68 and 69) are amended to specify that the repressible lethal gene and the repressor gene are located so that they segregate independently. Applicants respectfully submit that D1 does not disclose or suggest vectors having this characteristic as presently claimed.

Claims 97 and 98 of record (presently amended claims 95 and 96) stand rejected as being anticipated by D1, D2 and D3.

Applicants respectfully traverse this rejection. The DNA constructs of D1 have no utility for production of hybrid seed as described in the present application. Hence, D1 does not teach or suggest a plant transformation vector "for use in generating a parent plant for a hybrid cross" as claimed in instant claims 95 and 96. Applicants further respectfully submit that D2 and D3 do not disclose the use of a repressible lethal gene for hybrid seed production and do not teach or suggest plant transformation vectors for use in generating a parent plant for a hybrid cross, as claimed.

Claim 99 of record (claim 97 as presently amended) stands rejected as failing to contain any technical information and therefore being subject to the same arguments concerning novelty as

claims 97 and 98 of record. Presently amended claim 97 is directed to plasmids pG1, pG14, pPHAStet1 and pGG-14. It will be apparent to those of ordinary skill in the art that pG1, pG14, pPHAStet1 and pGG-14 are designators for particular plasmids, the construction of which is fully described in the examples and drawings of the instant application. Hence, the plasmids of instant claim 97 incorporate the technical features of such plasmids specified in the description. Applicants therefore respectfully submit that the claimed plasmids contain technical features distinguishing from references D1 - D3.

***Concerning Article 33(3) PCT***

Claims 2-4, 8, 9, 11-13, 23-27, 36-38, 61-68, 75-89 and 91-96 of record stand rejected under Article 33(3) PCT as lacking an inventive step in view of D1. The IPEA acknowledges that D2 and D3 do not disclose subject matter going beyond the disclosure of D1, and therefore have not been applied in this rejection.

Applicants respectfully traverse this rejection. All of claims 2-4, 8, 9, 11-13, 23-27, 36-38, and 61-68 of record are ultimately dependent on one of claims 1, 14, 40, 43, 44, or 53. Claims 1, 14, 40, and 44 of record each specifies that the inserted repressor gene segregates independently from the inserted repressible lethal gene, a limitation that is not taught or suggested by D1. Similarly D2 and D3 do not teach or suggest independent segregation of a repressible lethal gene and a repressor gene. Claims 43 and 53 of record do not stand rejected. Applicants therefore respectfully submit that claims 2-4, 8, 9, 11-13, 23-27, 36-38, and 61-68 of record are inventive over the teachings of D1-D3.

With respect to claims 75-89 and 91-96 of record, when they are dependent on claim 69 or 70 of record, claims 69 and 70 (now claims 68 and 69) are amended to specify that the repressible lethal gene and the repressor gene are located so that they segregate independently, a limitation that is not taught or suggested by any of D1 - D3, as discussed above, and are therefore novel and inventive over D1 - D3. Claim 75 of record specifies that the vector is "for use in generating a parent plant for a hybrid cross". As discussed earlier, the DNA constructs of D1 have no utility for production of hybrid seed as described in the present application. Hence, D1 does not teach or suggest a plant transformation vector as claimed in claim 75 of record (now claim 74). Applicants

further respectfully submit that D2 and D3 do not disclose the use of a repressible lethal gene for hybrid seed production and do not teach or suggest plant transformation vectors for use in generating a parent plant for a hybrid cross, as claimed. Therefore, Applicants respectfully submit that, claims 75-89 and 91-96 of record, when they are dependent on claim 75, are necessarily novel and inventive over D1-D3.

***Concerning Item VII***

Pages 66, 68, 70 and 71 of record are objected to for incorrect references to sequences in bold face or underlined font. Pages 66, 68, 70 and 71 are presently amended to depict the sequences in bold face and underlined font, conforming with the related description.

An objection is raised to SEQ ID NO: 8 of the sequence listing as not being identical with SEQ ID NO: 8 in the description on page 68. Accordingly, SEQ ID NO: 8 in the sequence listing is presently amended to conform with SEQ ID NO: 8 at page 68.

***Concerning Item VIII***

The IPEA contends that claims 10 and 86 of record are unclear on the grounds that no source of oncogenes 1 and 2 is indicated. Claims 10 and 86 (now claim 85) are presently amended to clarify that oncogenes 1 and 2 are oncogenes 1 and 2 of *Agrobacterium*.

Claim 25 of record is objected to on the basis that, in the case that only one of the lethal genes is selected from the specified group, it is unclear what the other gene is or where it is selected from. Applicants note that claim 25 is dependent on claim 14. Claim 14 does not specify the source of the repressible lethal genes, and has not been objected to as lacking clarity only for this reason. Claim 25 adds the further requirement that at least one of the repressible lethal genes specified in claim 14 is selected from a specified group. Applicants respectfully submit that, as claim 25 adds a further limitation to claim 14, which in turn is recognized by the IPEA as being clear, claim 25 necessarily also meets the requirements of clarity pursuant to Article 6 PCT.

Claims 27 and 88 of record are objected to as being redundant over other pending claims. Claims 27 and 88 of record are cancelled in the present amendments.

The IPEA objects to the terms pG1, pG14, pPHAStet1 and pGG-14 in claim 99 of record as being private denominations which are meaningless to the public. Applicants respectfully traverse this objection and submit that these terms are not private denominations which are meaningless to the public. Rather, the terms pG1, pG14, pPHAStet1 and pGG-14 are designations of particular plasmids, the details of which are provided in the examples and drawings of the instant application.

The designations are not private in that their meaning is clear and apparent on the face of the application. Those of ordinary skill in the art will understand that the terms pG1, pG14, pPHAStet1 and pGG-14 identify particular plasmids fully described in the examples and drawings by their particular technical features.

Claims 42, 46, 55 and 58 of record are objected to as being in the form of product by process claims. Applicants will address issues of claim construction and patentability during the national phase.

In view of the foregoing, entry of the amendments and reconsideration and withdrawal of the rejections of the claims are respectfully requested. Early issuance of an International Preliminary Examination Report that is positive as to the novelty, inventive step and industrial applicability of all of the pending claims is earnestly solicited.

Yours very truly,

Ottawa, Canada

SMART & BIGGAR

Encl.

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